priate anti-infective agent. While topical steroids may help to reduce pruritus and inflammation, they should never be the first line of therapy directed at the infection itself.

Relative contraindications include *Candida* and dermatophytes—because these organisms grow well on macerated skin, the use of a topical steroid in conjunction with an appropriate anti-infection agent may occasionally be appropriate; herpes simplex and zoster—customary treatment must be directed at the virus itself, but some physicians use a mild- to mid-strength topical steroid to reduce the burning and itching of these disorders and even intralesional steroids in an attempt to reduce the risk of postherpetic neuralgia in patients with zoster. Extreme caution must be used when topical steroids are applied to the face.

Potent and superpotent agents—betamethasone dipropionate (Diprolene), clobetasol propionate (Temovate) and diflorasone diacetate (Psorcon)—have a higher propensity to cause topical side effects such as atrophy, stria, purpura or even ulceration, particularly when used in thin-skin areas (periorbital and groin regions), under occlusion or in a pediatric patient. Acnelike eruptions—rosacea, perioral dermatitis—may occur on the face with virtually any topical steroid. Glaucoma has been implicated in many topical agents used around the eyes.

Practitioners must be aware that package inserts for some superpotent agents warn against the use of occlusion or in pediatric patients and require a "rest" period after two weeks of use to reduce the risks of topical and systemic side effects, especially adrenal suppression.

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Bowenoid Papulosis

BOWENOID PAPULOSIS is a unique and distinctive neoplasm of the genitoanal region recently shown to be virally induced. Known by this name and several others over the past 30 years, the condition has been unified by histopathologic changes similar to squamous cell carcinoma in situ (Bowen's disease).

Bowenoid papulosis primarily affects sexually active young adults and appears clinically as multiple skin-colored or pigmented papules on a circumcised penile shaft or labia majora and minora, but it may occur anywhere in the genitoanal region. The papules may be discrete, grouped, linear, confluent, smooth or verrucous in morphologic appearance and texture. They are usually asymptomatic but occasionally itch. Macular and leukoplakia-like lesions have been described.

The differential diagnosis includes warts, condyloma acuminatum, seborrheic keratoses, nevi, lichen planus and other papular conditions. Generally the larger red patches and plaques of Bowen's disease and erythroplasia of Queyrat are not confused with bowenoid papulosis.

On histopathologic examination, however, bowenoid papulosis bears a remarkable similarity to the atypia of Bowen's disease, with only minimal differentiating features. Because of this potential confusion and unawareness of the existence of bowenoid papulosis, unnecessary ablative procedures have been done in the past.

The natural history of this condition ranges from spontaneous regression over a period of months to rarely evolving into invasive squamous cell carcinoma. Without treatment, most remain benign and unchanged.

Prior suspicions of a viral cause have been confirmed by the identification of human papillomavirus (HPV) type 16. Other recent studies have linked bowenoid papulosis with HPV 16-induced cervical dysplasia and neoplasia. There is growing evidence that this disease is sexually transmitted, thus raising many new concerns regarding an otherwise benign process.

Therapeutic modalities that have been advocated include topical application of retinoic acid or 5-fluorouracil, cryotherapy, electrodesiccation with or without curettage, shave biopsy, surgical excision, vaporization by laser and interferon injection. Clinicians should use selective judgment in choosing an appropriate conservative modality, as some cases spontaneously regress and malignant degeneration is rare. Because recurrence of bowenoid papulosis is frequent, a biopsy should be taken of lesions recalcitrant to standard therapy to exclude malignancy.

In view of assumed sexual transmission and a proven association with cervical neoplasia, our emphasis should be on prevention. A patient with bowenoid papulosis should be thoroughly educated regarding HPV infections and the use of condoms (or abstinence) strongly advocated. Patients should be routinely examined for recurrence. Female patients or sexual partners of male patients with this disorder should be followed with regular cytologic, colposcopic and histologic examinations.

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Cutaneous Manifestations of the Acquired Immunodeficiency Syndrome (AIDS) and AIDS-Related Conditions

INFECTION BY THE HUMAN IMMUNODEFICIENCY VIRUS (HIV) and subsequent depletion of immune function may involve a variety of organs in the acquired immunodeficiency syndrome (AIDS) and AIDS-related conditions (ARC). The skin as a mirror of internal disease provides a readily accessible diagnosis of AIDS or ARC in many cases.

Viral and fungal infections of unusual severity were recognized early on as harbingers of AIDS or ARC. Other infectious agents occurring as unusual skin lesions have been reported recently. Herpes simplex virus, *Cryptococcus neoformans, Histoplasma capsulatum* and *Mycobacterium avium-intracellulare* may appear as skin ulcers, vesicles or granulomas. Herpes simplex virus in particular may cause severe, chronic perirectal ulcerations and abscesses. Mucosal infections with *Candida albicans* usually present as white patches in the buccal and oropharyngeal areas. Hairy leukoplakia—white roughened areas along the sides of the tongue—has recently been linked with the Epstein-Barr virus and occasionally *Candida*, herpes and human papillomavirus.

Florid presentations of warts and molluscum contagiosum in a person with risk factors for HIV infection should suggest close observation and counseling.

In about 40% to 50% of patients with AIDS or ARC, a malignant process will develop during the course of the disease. An aggressive form of Kaposi's sarcoma, associated with profound lymphocytic depletion, became one of the criteria for the diagnosis of AIDS in the early 1980s. Vigorous treatment of Kaposi's sarcoma has resulted in worsening of the patient's overall condition in many cases. Other malignant disorders include squamous cell carcinoma, especially of the perirectal area, and lymphomas of both the Hodgkin's and undifferentiated varieties. Treatment of these conditions is usually of some benefit.

Common skin conditions that may be recalcitrant to conventional therapy when associated with AIDS or ARC include psoriasis and seborrheic dermatitis.

It is estimated that between 1 million and 1.5 million persons in the United States are infected with HIV (Centers for Disease Control, Atlanta). In a person with risk factors for HIV infection, examination of skin and mucous membranes may yield an early diagnosis of AIDS or ARC.

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Short-Contact Anthralin Therapy for Psoriasis

ANTHRALIN WAS FIRST USED in the 1920s as a treatment of psoriasis vulgaris. Over the years, it has been shown to be one of the most effective topical treatments of stable psoriasis. No systemic toxicity has been reported. Its side effects, however, of staining the skin and everything with which it comes in contact, as well as irritating uninvolved skin, have limited its use. Efficacy and side effects are both dose-related and may be difficult to separate. Many schedules have been devised to maximize efficacy and patient compliance while reducing side effects; until recently, however, anthralin use was practically impossible in an outpatient population.

In 1980 the concept of short-contact therapy with anthralin was developed. Basically, this involves applying higher concentrations of anthralin to suitable psoriatic plaques for shorter periods of time than with traditional several-hours or overnight treatment with an anthralin hard paste. After an appropriate period, the anthralin is removed. The basis for this treatment lies in pharmacokinetic studies that show that anthralin penetrates faster through involved psoriatic epidermis than through uninvolved epidermis. At the time of removal, penetration has occurred mainly in the diseased skin. Controlled studies have shown that short-contact therapy is effective in clearing psoriasis.

Various short-contact regimens have been used. Patient compliance is optimal when periods of application from 20 to 60 minutes are used. This therapy also requires an intelligent and motivated patient because side effects are not infrequent. Stable plaque-type psoriasis is the preferred indication for this regimen. Anthralin concentrations from 0.1% to 2.0% have been used in a variety of vehicles. Creams and ointments provide greater patient compliance than hard paste; newer formulations are being developed. The initial contact time should be from 15 to 20 minutes, then the anthralin should be thoroughly removed with a solvent suitable for the base (soap or petrolatum) and an emollient applied to the skin. Therapy should be interrupted if persistent irritation occurs or if psoriasis is rapidly spreading. Topical steroids may be used to treat anthralin irritation.

The combination of short-contact anthralin therapy with other psoriatic treatment modalities, such as ultraviolet A or B light, tar, retinoids, topical steroids and psoralen plus ultraviolet A light, may improve the therapeutic response. Further studies are being conducted with such combinations in attempts to achieve maximum psoriatic clearing in an outpatient setting.

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